

Junxiu TANG

CONTACT INFORMATION

Zhejiang University
State Key Lab of CAD&CG
Interactive Data Group
Hangzhou, Zhejiang, 310058, China

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Updated: Nov. 25, 2024

RESEARCH INTERESTS

Summary: My research interest lies in the design and interaction of data-driven communication, storytelling, and event sequence visualization. I am also keen to explore the fusion of scientific logic and artistic expression.

Keywords: Data Visualization, Visual Analytics, Fixed-order Event Sequence, Embedded Visualization, Data-driven Art, Data-driven Communication, Data Video

EDUCATION

Zhejiang University, Hangzhou, China 09.2019–Now
Department of Computer Science and Technology
College of Computer Science and Technology
Ph.D. Candidate, with Prof. Yingcai Wu, at ZJU-IDG
Research Focus: Fixed-order Event Sequence Visualization and Data Art

Inria, Palaiseau, France 11.2023–06.2024
Inria Saclay Center
Visiting Ph.D. Student, with Dr. Petra Isenberg, at Aviz
Research Focus: Embedded Visualizations in Swimming Videos

Zhejiang University, Hangzhou, China 09.2014–06.2019
Department of Digital Media Technology
College of Computer Science and Technology
B.Eng.
Research Focus: Data Video

RESEARCH INTERNSHIPS

JD Intelligent Cities Research, Jing Dong Technology
Beijing, China 02.2022–06.2022
Research Intern, Software Engineer
Worked on visualization and visual analytics for urban computing, especially intelligent transportation and disease control. Supervised by Dr. Jie Bao and Prof. Yu Zheng.

IDEA Lab, Alibaba-Zhejiang University Joint Research Institute of Frontier Technology (AZFT)
Hangzhou, China 09.2019–12.2021
Research Intern
Cooperated with DAMO Academy and Cainiao.

Cainiao Smart Logistics, Alibaba Group
Hangzhou, China 09.2020–12.2021
Research Intern, UI&UX Designer Worked on visual analytics for intelligent logistics, especially on order processing monitoring and optimization.

**Alibaba DAMO Academy for Discovery, Adventure,
Momentum and Outlook, Alibaba Group**

Hangzhou, China

11.2019-09.2020

Research Intern, Algorithm Engineer

Worked on visualization theory and intelligent methods for data
video generation and augmentation.

PUBLICATIONS

Asterisk* indicates equal contribution.

Junxiu Tang, Fumeng Yang, Jiang Wu, Yifang Wang, Jiayi Zhou, Xiwen Cai, Lingyun Yu, and Yingcai Wu. A Comparative Study on Fixed-order Event Sequence Visualizations: Gantt, Extended Gantt, and Stringline Charts. In *IEEE Transactions on Visualization and Computer Graphics (TVCG) 2024*, DOI: 10.1109/TVCG.2024.3358919, OSF.

Junxiu Tang, Yuhua Zhou, Tan Tang, Di Weng, Boyang Xie, Lingyun Yu, Huaqiang Zhang, and Yingcai Wu. A Visualization Approach for Monitoring Order Processing in E-Commerce Warehouse. In *IEEE Transactions on Visualization and Computer Graphics (TVCG) 2022 (Proceedings of IEEE VIS '21)*, DOI: 10.1109/TVCG.2021.3114878.

Junxiu Tang, Lingyun Yu, Tan Tang, Xinhuan Shu, Lu Ying, Yuhua Zhou, Peiran Ren, and Yingcai Wu. Narrative Transitions in Data Videos. Short Paper. In *Proceedings of IEEE VIS '20*, DOI: 10.1109/VIS47514.2020.00037, Project webpage.

Junxiu Tang, Rui Sheng, Yifang Wang, Xinhuan Shu, Xiaojiao Chen, Tan Tang, and Yingcai Wu Posts with No Response: The Island of Loneliness. In *IEEE VIS Arts Program (VISAP2023@IEEE VIS)*, DOI: 10.1109/VISAP60414.2023.00007, OSF.

Junxiu Tang, Jiayi Zhou, Yifang Wang, Xinhuan Shu, Peiquan Xia, Xiaojiao Chen, Tan Tang, and Yingcai Wu. Loss of Sonnet 18. In *ACM SIGGRAPH Art Gallery (2024)*, DOI: 10.1145/3641523.3669939, OSF.

Junxiu Tang, Huimin Ren, Zikun Deng, Di Weng, Tan Tang, Lingyun Yu, Jie Bao, Yu Zheng, and Yingcai Wu Towards Better Illegal Chemical Facility Detection with Hazardous Chemicals Transportation Trajectories. In *Proceedings of ChinaVis '24*, DOI: to appear.

Tan Tang*, **Junxiu Tang***, Jiewen Lai, Lu Ying, Peiran Ren, Lingyun Yu, and Yingcai Wu SmartShots: Enabling Automatic Generation of Videos with Data Visualizations Embedded. Extended Abstract. In *ACM International Conference on Multimedia (Proceedings of MM '20)*, DOI: 10.1145/3394171.3414356.

Tan Tang, **Junxiu Tang**, Jiewen Lai, Lu Ying, Yingcai Wu, Lingyun Yu, and Peiran Ren SmartShots: An Optimization Approach for Generating Videos with Data Visualizations Embedded. In *ACM Transactions on Interactive Intelligent Systems (TiiS) 2022*, DOI: 10.1145/3484506.

Sadia Rubab, **Junxiu Tang**, and Yingcai Wu Examining Interaction Techniques in Data Visualization Authoring Tools from the Perspective of Goals and Human Cognition: A Survey. In *Journal of Visualization 2021*, DOI: 10.1007/s12650-020-00705-3.

Tan Tang, **Junxiu Tang**, Jiayi Hong, Lingyun Yu, Peiran Ren, and Yingcai Wu Design Guidelines for Augmenting Short-form Videos using Animated Data Visualizations. In *Journal of Visualization 2021 (Proceedings of ChinaVis '19)*, DOI: 10.1007/s12650-020-00644-z.

Jiayi Zhou, Renzhong Li, **Junxiu Tang**, Tan Tang, Haotian Li, Weiwei Cui, and Yingcai Wu. Understanding Nonlinear Collaboration between Human and AI Agents: A Co-design Framework for Creative Design. In *ACM CHI conference on Human Factors in Computing Systems (Proceedings of CHI '24)*, DOI: 10.1145/3613904.3642812.

Xinhuan Shu, Alexis Pister, **Junxiu Tang**, Fanny Chevalier, and Benjamin Bach Does This Have a Particular Meaning? Interactive Pattern Explanation for Network Visualizations In *IEEE Transactions on Visualization and Computer Graphics (TVCG) 2024 (Proceedings of IEEE VIS '24)*, DOI: 10.1109/TVCG.2024.3456192.

Xinhuan Shu, Aoyu Wu, **Junxiu Tang**, Benjamin Bach, Yingcai Wu, and Huamin Qu What Makes a Data-GIF Understandable? In *IEEE Transactions on Visualization and Computer Graphics (TVCG) 2021 (Proceedings of IEEE VIS '20)*, DOI: 10.1109/TVCG.2020.3030396, Project webpage.

Sadia Rubab, Lingyun Yu, **Junxiu Tang**, Yingcai Wu Exploring Effective Relationships Between Visual-Audio Channels in Data Visualization. In *Journal of Visualization 2023*, DOI: 10.1007/s12650-023-00909-3.

Tan Tang, Kaijuan Yuan, **Junxiu Tang**, Yingcai Wu Toward the Better Modeling and Visualization of Uncertainty for Streaming Data. In *Journal of Visualization 2018 (Proceedings of ChinaVis '18)*, DOI: 10.1007/s12650-018-0518-y.

Ran Chen, Xinhuan Shu, Jiahui Chen, Di Weng, **Junxiu Tang**, Siwei Fu, and Yingcai Wu Nebula: A Coordinating Grammar of Graphics. In *IEEE Transactions on Visualization and Computer Graphics (TVCG) 2022*, DOI: 10.1109/TVCG.2021.3076222.

Yifang Wang, Yang Wang, Yifan Cao, Huamin Qu, **Junxiu Tang**, and Yingcai Wu Explore Mindfulness without Deflection: A Data Art Based on the Books of Songs. Pictorial. In *Proceedings of IEEE VISAP '21*, DOI: 10.1109/VISAP52981.2021.00014, Project webpage.

ACADEMIC TALK

A Comparative Study on Fixed-order Event Sequence Visualizations: Gantt, Extended Gantt, and Stringline Charts.

Tampa, Florida, US (Virtual) 10.2024
Conference talk @VIS 2024

Loss of Sonnet 18.

Denver, US 07.2024
Conference artist talk @SIGGRAPH 2024

Posts with No Response: The Island of Loneliness.

Hong Kong, China 07.2024
Conference artist talk @ChinaVis 2024

Towards Better Illegal Chemical Facility Detection with Hazardous Chemicals Transportation Trajectories.

Hong Kong, China 07.2024
Conference talk @ChinaVis 2024

Posts with No Response: The Island of Loneliness.

Melbourne, Australia 10.2023
Conference artist talk @IEEE VIS 2023

ART EXHIBITION	Visualization x Art. Hangzhou, China Invited talk @School of Design and Innovation, China Academy of Art	06.2023
	A Visualization Approach for Monitoring Order Processing in E-Commerce Warehouse. New Orleans, Louisiana, US (Virtual) Conference talk @IEEE VIS 2021	10.2021
	Narrative Transitions in Data Videos. Salt Lake City, Utah, US (Virtual) Conference talk @IEEE VIS 2020	10.2020
	Design Guidelines for Augmenting Short-form Videos using Animated Data Visualizations. Chengdu, China Conference talk @China Vis 2019	07.2019
	A Gear-like Storyline of Inception. Shanghai, China Conference talk @China Vis 2018	07.2018
	Toward the Better Modeling and Visualization of Uncertainty for Streaming Data. Shanghai, China Conference talk @China Vis 2018	07.2018
	Loss of Sonnet 18. SIGGRAPH Art Gallery, Denver, US	07.2024
	Posts with No Response: The Island of Loneliness. China Vis Art Exhibition, Hong Kong, China Infomation+ Exhibition, Edinburgh, UK IEEE VIS Art Exhibition, Melbourne, Australia	07.2024 11.2023 10.2023
	A Gear-like Storyline of Inception. China Vis Art Exhibition, Shanghai, China	07.2018
	Panel Co-organizer What Do Visualization Art Projects Bring to the VIS Community?	VIS 2024
ACADEMIC SERVICE	Student Volunteer IEEE Visualization & Visual Analytics (VIS) China Visualization and Visual Analytics Conference (ChinaVis) IEEE Eurographics / VGTC Symposium on Visualization (EuroVis) Infomation+ Conference (Info+)	2024 2024 2024 2023
	Conference Review IEEE Visualization & Visual Analytics (VIS) IEEE Pacific Visualization Symposium (PacificVis) ACM Conference on Human Factors in Computing Systems (CHI) China Visualization and Visual Analytics Conference (ChinaVis)	2022-2024 2024 2024-2025 2022-2024

TEACHING

Zhejiang University

21191590: Cross Media Visualization
21121280: Information Visualization
Teaching Assistant

Winter 2022

Zhejiang University

International Visualization Summer School
Teaching Assistant, Teaching Assistant Coordinator (TAC)

Summer 2021

Zhejiang University

International Visualization Summer School
Teaching Assistant

Summer 2019-2020

Zhejiang University

21191590: Cross Media Visualization
21121280: Information Visualization
Teaching Assistant, Teaching Assistant Coordinator (TAC)

Winter 2020

MENTORSHIP

Zhejiang University

Weichen Sun, Ph.D. student, co-mentored with Tan Tang
Jiayi Zhou, undergraduate student, co-mentored with Yingcai Wu
Yuhua Zhou, Master student, co-mentored with Yingcai Wu
Boyang Xie, undergraduate student, co-mentored with Yingcai Wu
Lu Ying, undergraduate student, co-mentored with Yingcai Wu

2024
2022-2024
2020-2021
2020-2021
2019-2020